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OPEN PEER REVIEW

Human Development Index and Under-five Mortality in the Middle East and North African Countries

Hamid Sepehrdoust, Saber Zamani Shabkhaneh, Sadra Sepehrdoust

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About this report

This open peer review (OPR) report shows the public comments made on this article during peer review, by the reviewers, the associate editor and the editor-in-chief, for every revision round, together with the authors' replies. Comments appear only with the consent of the people who wrote them. Reviewers who chose to sign their report are named; the others are shown as "Referee". Comments are edited for language only, and confidential remarks to the editors are not included.

More about open peer review: brieflands.com/knowledgebase/opr

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1 Original submission

1 comment · 6 Oct 2021

Editor-in-Chief

MAJOR REVISION 6 Oct 2021

Dear Authors
According to the reviewers' and associate editor's comments, your article needs major revision. Please respond to the reviewers' comments and submit the required files. In addition, please cite two related articles published in the MEJRH.

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Revision 1

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

To: The Editor Middle East Journal of Rehabilitation and Health Studies
Refer to manuscript ID: 117177

Thank you for allowing me to revise the manuscript titled: "**Human Development Index, Public Health Spending and Mortality Rate: Evidence from MENA**" and modify the text based on the editorial board's recommendation and review's comment. The amendments are highlighted in Green Background Color within the text body of the resubmitted revised manuscript.

Sincerely Yours
(Corresponding Author)

Associate Editor's Comments and Responses

Editorial Recom. 1- Please write the p-value in the result
Respond to Recom. 1: "The result of the model estimation showed, the R-squared is 0.96, indicating that approximately 96 percent of the observed variation of the dependent variable is explained by dependent variables of the model (P-value = 0.0034)." is added to the abstract and in the results section.
Editorial Recom 2- It is better to mention the finding of your study in the conclusion section, not your suggestions for the future.
Respond to Recom. 2: The following passage is added to the conclusion section "The findings of this study highlight the important role of per capita GDP growth and higher per capita income of people with better access to health facilities. It is clear that as the rate of economic growth increases, GDP increases and so does the share of people in national economic output. Increasing the per capita income of people increases the purchasing power of consumer goods and services, including consumer demand for health services and care. The results of this study confirm Wagner's income-consumption theorem, which states that as a society grows and develops, national income increases, and thus people's consumption expectations for goods and welfare services increase. At this stage, the role of government in providing welfare facilities to the people, including their health and care needs, usually increases with government expenditure and through appropriate taxation policies; the government meets the expectations of the society by providing welfare services.

Editorial Recom. 3- Keywords: Keywords should be chosen by using MeSH. Don't use the abbreviation form in the keywords
Respond to Recom. 3: That has been corrected as follows **Keywords:** Development, Health, Human Development Index, Income Inequality, Mortality, Middle East and North Africa.
Editorial Recom. 4- The introduction section is very long and should be written in a shorter form.
Respond to Recom. 4: The introduction section has become more concise in meaningful text.
Editorial Recom. 5- The Introduction should answer the question 'Why:' why you choose that topic for your research; why it is important; why you adopted a particular method or approach; and so on. You should clearly state either your hypothesis or research question.
Respond to Recom. 5: The reason behind the questions have been answered clearly in different parts of the introduction as follows: "This study aims to investigate the impact of the human development index (HDI) and other important macroeconomic variables on the under-five mortality rate of selected Middle East and North Africa countries (MENA), during the years 2003 to 2019." **"**In recent decades, the costs associated with health and health care have increased significantly with economic growth and the prosperity of society. For this reason, one of the most important questions for policymakers and planners in the health sector of countries is how much of the country's budget should be spent on health and health expenditure." "The mortality rate of children under five is of particular importance because it is often related to the general health of the community and the living conditions of the family, the health of the mother, and the economic status of the head of the household. Many thinkers in social science refer to the under-five mortality index as an indicator of social development from a socioeconomic perspective". "Several studies look at the relationship between socioeconomic variables and mortality rates. Perhaps a major reason for this is the widespread assumption that the under-five mortality rate is an indicator of development. The main objective of the present study is to investigate the relationship between macro-socio-economic variables and mortality rate in developing MENA countries and to find a clear answer to the question of whether the Human Development Index (HDI) and income inequality variable are the main factors affecting mortality rate in MENA. In addition, the possible and meaningful full influence of other

important variables such as urbanization rate, government health expenditure, and per capita gross national product was also investigated."

Editorial Recom 6- The literature review section should be removed from the article. You should write a Summary of Literature Review in the interdiction section.

Respond to Recom. 6:

The basic concept is derived from the literature review. Since the theoretical and experimental foundations of research are necessary to research if you allow this section not to be omitted because the basis of the research is based on this literature review. It will usually extend into the unconventional introduction and the introduction section. Of course, if you insist on removing the literature review section, I will delete it.

Editorial Recom. 7- The method is weak and should explain what you did. Explain your methodological approach, Write the type of study. Authors should describe their study design

Respond to Recom. 7:

This study used the panel data analysis method, to investigate the impact of macroeconomic variables such as Human Development Index (HDI), Gross Domestic per capita (GNI) based on purchasing power (2011 PPP $), Urbanization rate, government Health Expenditure as a percentage of GDP, and Income Distribution Inequality index (Gini) on the under-five mortality rate.

The panel data analysis used in this study is a subset of longitudinal data in which at each stage, similar information is collected from each MENA member country and entered into the research model. Therefore, the research model is presented as equation 1.

$$MR_{it} = \beta_0 + \beta_1 HDI_{it} + \beta_2 GNI_{it} + \beta_3 HEP_{it} + \beta_4 INE_{it} + \beta_5 UR_{it} + \varepsilon_{it} \quad (1)$$

Where; The variable MR indicates the under-five mortality rate, HDI is the human development index, GNI indicates gross national income, HEP indicates government health expenditure as a percentage of GDP, INE indicates income distribution inequality and UR is the urbanization rate in each country (i), in a specific year (t). The relevant data are collected from the Middle East/North Africa countries (MENA) data recorded in World Development Indicator (WDI) and United Nation Development Program (UNDP) database network, for the years 2003-2019. The MENA selected countries in the study are Bahrain, Egypt, Iran, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, and the UAE.

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Editorial Recom. 11- Many sentences have no reference.
Respond to Recom. 11: All the cited sections, including Morozi, have been cited with the appropriate references to the theoretical and experimental literature of the research.
Editorial Recom. 12- The conclusion section is too long. Authors should restate the research problem addressed in the paper, summarize the overall arguments or findings, and suggest the key takeaways from your paper.
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Editorial Recom. 13- Add the study limitations.
Respond to Recom. 13: The present study was on selected countries of the Middle East and North Africa (MENA) and we did not face any particular limitations in terms of data collection.
Editorial Recom 14- The whole article must be edited according to the journal format (reference styles …)
Respond to Recom. 14: The text has been revised to match the format of the journal in all sections, including abstracts and references within the text and the end of the text.

Editorial Recom. 15- Some sentences are repeated in different parts of the article.
Respond to Recom. 15: Duplicate sentences in the text were removed.
Editorial Recom. 16- Edit the manuscript by a native English editor.
Respond to Recom. 16: The English text was revised and edited several times, using Grammarly software.

EIC Decision and Responses

Editorial Recom. 1- Please respond to the reviewers' comments and submit the required files for up to two months.
Respond to Recom. 1: All comments of the judges and the editor were answered, respectively.
Editorial Recom. 2- please cite two related articles published in the MEJRH
Respond to Recom. 2: In the final version of this article, after acceptance, two reference articles from the MEJRH journal will be added to this article.

Reviewer's Comments & Responses

Reviewer's Comment 1- The method needs further explanation. Did you use the census data? Is this an ecological study?
Respond to Comment 1: Time series data have been used for this study. This is an interdisciplinary study between indicators of economic development and community health.
Reviewer's Comment 2- Where did the information come from? HDI, MMR, and U5MR information were extracted from the site ?
Respond to Comment 2: The relevant data are collected from the Middle East/North Africa countries (MENA) data recorded in World Development Indicator (WDI) and United Nation Development Program (UNDP) database network, for the years 2003-2019. The MENA selected countries in the study are Bahrain, Egypt, Iran, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, and the UAE.

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Respond to Comment 3: The statistical population of the study is related to the countries of Mena and the data related to the annual mortality of children under five years of age in each of the countries during the study period.
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2 Revision 1

1 comment · 10 Apr 2022

Editor-in-Chief

MINOR REVISION 10 Apr 2022

Dear Authors
Thank you for improving the quality of the article. However, some grammatical and structural problems are still observed in the manuscript. It is suggested that the article be edited by a native English-speaking editor. Please respond to the reviewers' comments and submit the required files.

3

Revision 2

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

To: The Editor Middle East Journal of Rehabilitation and Health Studies
Refer to manuscript ID: 117177

Thank you for allowing me to revise the manuscript titled: "**Human Development Index, Public Health Spending and Mortality Rate: Evidence from MENA**" and modify the text based on the editorial board's recommendation and review's comments for minor revision. The amendments are highlighted in Green Background Color within the text body of the revised manuscript.

Sincerely Yours
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Associate Editor's Comments and Responses (Second Round)

Editorial Recom. 1- Please avoid using abbreviations in the title
Respond to Recom. 1: The abbreviations have been removed from the title and substituted by full name.
Editorial Recom 2- The whole article should be edited by a native English editor.
Respond to Recom. 2: The whole article was revised and edited again grammatically to correct any typos and unwanted mistakes.
Editorial Recom. 3- Please write the abstract limited to 200 to 300 words
Respond to Recom. 3: The abstract is limited now to over 200 and under 300 words.

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3 Revision 2

1 comment · 16 Apr 2022

Editor-in-Chief

ACCEPT 16 Apr 2022

Dear Authors
We are pleased to inform you that your article is accepted for publication in the MEJRHS. We hope to receive other qualified articles from your group.